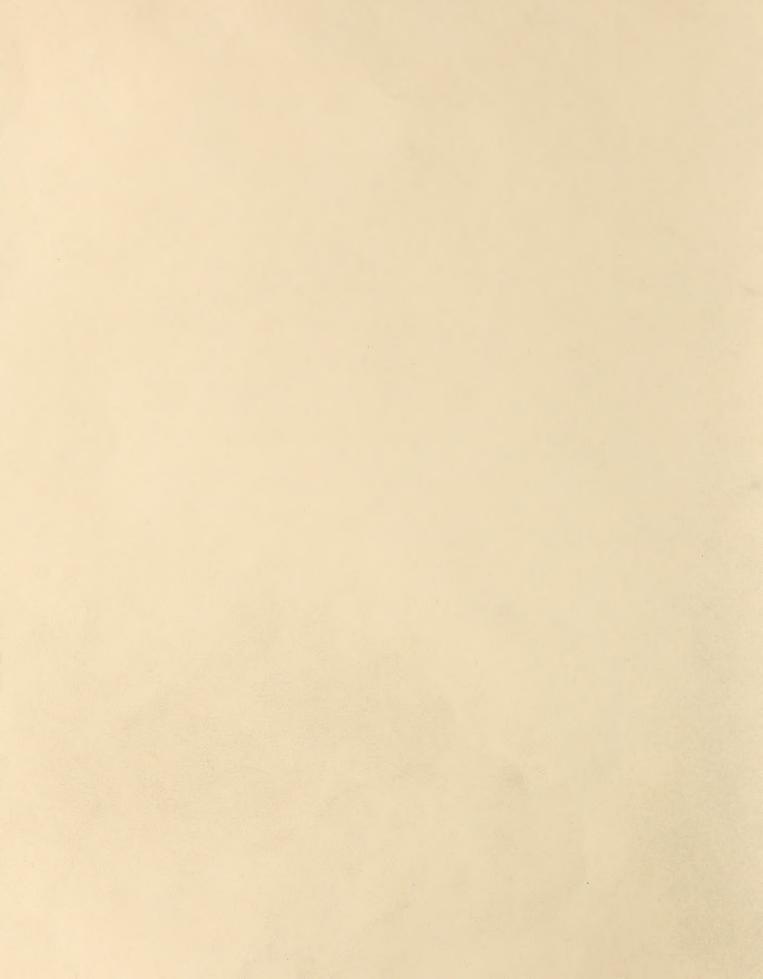
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SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for the

MISSOURI and ARKANSAS

DRAINAGE BASINS

March 1, 1940

Issued by the
United States Department of Agriculture
Soil Conservation Service
Division of Irrigation
In Cooperation with
The Colorado Agricultural Experiment Station
Colorado State College
Fort Collins, Colorado

March 10, 1940

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SNOW SURVEYS AND IRRIGATION WATER FORECASTS FOR MISSOURI AND ARKANSAS RIVERS Warch 1, 1940

conducted cooperatively with the State Engineers of Wyoming and Colorado, and various municipalities, irrigation This work is otherwise principally by field personnel of the following organizations: Forest Service, National Park Service, Bureau The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by the associations, power companies and others. Precipitation records are supplied by the U. S. Weather Bureau. Division of Irrigation, Soil Conservation Service, of the U. S. Department of Agriculture, in cooperation with State departments, other Federal bureaus and local organizations. The snow measurements are made of Reclamation, U. S. Geological Survey, War Department and State Experiment Stations.

PRECIPITATION DATA

ure		w)	270810
Departure	Norma	Inches	10.15 +0.15 +0.18 +0.17 +0.17
Precipitation	February	Inches	1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Departure From	Normal	Inches	0001000
Precipitation October 1 to	February 29	Inches	2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
STATE			East. Mont. Cent. Mont. North Wyo. Wyoming Colorado
WATERSHED			Missouri Missouri Missouri North Platte South Platte Arkansas

and the Arkansas River in Colorado was above normal during February, but the accumulated precipitation since Precipitation on the watershed of the Missouri and its tributaries in Montana, Wyoming and Colorado, October 1 is still below normal throughout the area

of Recipantion, U. S. Beological Survey, Mar Department and State Experiment Stations. This work is ordered as ordered by Held personnel of the following organizations. The ency nesonments are noted by Held by Hel and to be provided the state of the contract and transferring and transferring to the state of t associations, power companies and offers, Produkteston records are supplied by the U. 5. We then Precon. Distance of Arrigorian, Soil Demonration Service, of the U. S. Popursont of Agriculture, in respection

NOTES NOTES TO A SECTION ASSESSMENT

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SUMMARY OF MARCH 1 SNOW SURVEYS AND COMPARISON OF DATA

WITH THAT OF PREVIOUS YEARS BY WATERSHEDS

The state of the s	Sn	Snow Depth	th th	Water	r Content	ent	Number	Snow 1	Density		0	Water Content
WATERSHEDS	Five		01/6	Five		1940	Courses Report-	0 4	1939	1940	Five	1 0,
Con the section wheel	Avg.*		The state of	Avg.*			ing 1940	Avg.*	1		Avg.*	
	In.	In.	In	In	In.	In.		Percent	Percent	Percent	The state of the s	
MISSOURI RIVER												
. Toffoncon Rimon	75.1	10.1	20.7		N O		ıc	90	충	Ж	200	76
Madison River	いた。	58.7	37.0	16.3	17.5		7 80	30	30	787	63	78
Gallatin River	33.0	39.4	31.4		9.51		_	56	, †	27	66	00 00
Missouri River**	27.57	33.6	53.6	10	100	15,0	900	25.	志	ನಕ	82	691
Marias River	4.04	2000	40.0		1,00		N C	शन	7.5	77.0	2 5	22
Yellowstone River	7.85	30.8	かってい	0 1	0,7		2 -	7.0	₩ 1	22 6	×	26
Shoshone Kiver	1700	20.00	さんか	0	TOOT		1 7	77	ित	27	25	0 11
bignorn Aiver	54.0	40.5	עעיים	0	17.		00	27	1 2	0,1	0 V V	00
North Platte River	53.5	53.5	46.0		16.8		יוכ	27	3.6	300	× 1	% C
Sweetwater River	32.7	36.4	22.8		9.1		-1	24	5	26	5	99
Laramie River	31.1	36.7	27.4	- 60	20,0		0)	28	56	28	91	82
South Platte River***	15.8	26.8	14.5		0.9		n	23	22	56	105	63
Crow Creek	18.2	27.7	13.6		6.2		H	23	22	27	88	9
Poudre River	33.1	38.7	28.2	9	9.6		_	28	S)	30	16	88
Big Thompson River	55.5	57.9	9	17.1	17.6		N	37	22	30	200	18
St. Vrain River	34.1	43.9	28.1		1.6		-1	74	7	25	84	76
Boulder Creek	24.2	37.4			11.3		N	31	30	30	112	#/
Clear Creek	39.8	50.5	33.8	. 9	12.9		H	25	56	25	82	1 79
ARKANSAS RIVER	33.1	38.9	26.9	8.5	10.01	6.3	200	26	56	23	47	63

*Some for shorter periods. **Headwaters of Missouri River

issouri River ***Above Denver, Colo.

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the water content of the snow on 5 snow courses on the watershed of the Jefferson was 7.5 inches; on 8 courses on the Madison, 10.2 inches; on 7 courses on the Gallatin, 8.4 inches; on 2 courses on the Marias, 9.6 inches; and on 9 courses on the headwaters of the Missouri, 5.6 inches. On this date last year the water content of Gallatin and Marias Rivers in Montana, is considerably less than it was last year at this time. On March The snow cover on the watersheds of the Wissouri River and its tributaries, the Jefferson, Madison, the snow on these courses was respectively 9.8, 17.5, 9.5, 17.6, and 8.1 inches.

March 1 this year, and 17.8 inches a year ago. The March 1 record for 9 courses on the Laramie watershed shows and 6.0 inches, March 1 this year. Last year on this date these courses showed water contents of 9.7 and 7.0 The water content of the snow for 9 courses on the watershed of the North Platte was 14.6 inches on On the watersheds of the Bighorn and the Vellowstone Rivers in northern Wyoming the snow cover is also less than last year. Six courses on the Bighorn and 10 on the Vellowstone show average water contents of 5. a water content of 7.8 inches and 9.5 inches on March 1, 1939.

Summaries of the data are given in the accompanying tent of the snow was 8.5 inches on March 1 this year and 9.6 inches, March 1 last year. The same trend is shown this date last year there was 6.0 inches of water in the snow. For 7 courses on the Poudre River the water conand 12.9 inches last year. The average water content for 8 courses on the watershed of the Arkansas River was by the courses on the Big Thompson River. For the St. Vrain River, Boulder Creek, and Clear Creek watersheds the water content of the snow on the courses was respectively 6.9, 8.4 and 8.3 inches this year and 9.1, 11.3 Although precipitation on the watersheds of the South Platte and Arkansas Rivers in Colorado was above normal during January and February, the snow cover is less than it was last year at this time. On March 1, 1940 there was 3.8 inches of water in the snow on the three courses on the headwaters of the South Platte. 6.3 inches, March 1 this year and 10.0 inches a year ago.

there is sufficient moisture in the surface soil. Stream flow is much below normal throughout most of the three The subsoil is deficient in moisture in Montana, Wyoming and Colorado. In areas where the snow has melted normal snow cover in the mountains indicate that the summer runoff from the watersheds of the streams in these it was last year at this time. The unusually low stream flow has resulted in a serious shortage in reservoir states. However, because of early melting of snow, the flow of the Yellowstone is considerably greater than storage on the North Platte in Wyoming and the South Platte and Arkansas in Colorado. Dry subsoil and below states will be less than last year unless unusually heavy snowfall occurs during March and April.

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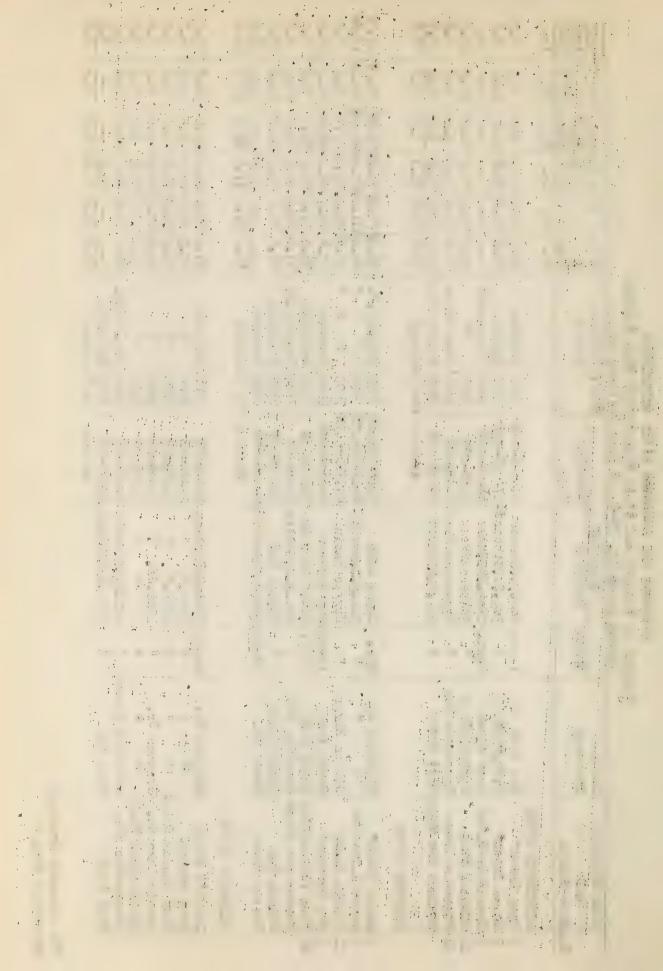
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MISSOURI AND ARKANSAS RIVER WATERSHEDS

Summary of Federal and State Cooperative Snow Surveys Issued March 10, 1940, at Fort Collins, Colo.

			rssne	issued March 10, 1940	, at Fort	Collins,	s, Colo.						
	Main Drainage	Local		Location		Elev.	National	.far.	Show	Course	1 ,	rements	
	and	Dreinage	State	Locality	scrip-			Av	13	PA _V	Water C	Content	
No	No Snow Course				tion				1.97.91	1940 Avg	• 1939	1940	
	JEFFERSON RIVER						e tre estados polocididos			In. In.	In.	In.	
9	Camp Creek*	Red Rock Cr.	Icaho		21-13N-36E	0089	Targhee	S		2	_	0.9	
1	Moose Creek*	N.Fk.BigHole	=	Zmi .S. Gibbons B	27. 27N-21E	6200	Salmon	1,1.6	45.4 3	35.9 11.2	2 12.5	9.1	
1	East Fork R.S.*	Rock Creek	Mont.		16-2N-17W	5400	Bitterroot	1		1		1	
10	Gibbons Pass	N.Fk.BigHole	=	Gibbons Pass	4-25-19W	7100		5	65.6 5	91	9 17	14.4	
30		Pipestone Cr.	=	Pipestone Pass	11-11-11	7200	Deer Lodge	000		m	7 - 5	2.5	
	Elkhorn Hot Spgs Wiss River	Wiss River	=	Smi.N.Polaris	15-45-12W	8450	Beaver Head	27.9	urbannolema ma	26.0 6.8	MI	5.7	
	CHEST CONTRACTOR	· Gradina ·			Average	for Dr	Drainage	;	1:0.1	30.1 9.	2	7.5	
	MADISON RIVER		4,4,4										
S	Aster Creek*	Firehole R.	Wyo.	Lewis Lake	44,31110.61	77001	Yel.Nat.P.	一版。99	74。出3	36.8# 22.	N		=+1_
00	Lewis L.Divide*	# #	=	Zmi.S.Lewis L.	44.21110.7W	2900	H H	16 to	11.2#5	7.8#30.	3	-	#
	Norris Basin	Gibbon River	=	д	WT-011NE-44	7500	# # #	30.9	35.0 2	5.0 7.		6.2	
2	Big Springs*		Idaho	Big Springs	34-14N-14E	6500		57.4 59.7	59.7 4	46.2 16.9	9 18.3	11	
16	West Yellowstone	South Fork	Mont.	W.Yellowstone	34-138-5E	0029	d	36.9	37.2 2	7.5 10.		~	
	Twenty-one Mile*		=	Smi.S.Gallatin	1-115-5国	7150	е	119.24	19.0 3	7.3 13.		9.7	
	Hebgen Dam	Cabin Creek	=	Hebgen Dam	W	6550	r .	1 7. 7.7.	th.5 3	7.2 13.	5	10	
	Valley View	Denny Cr.	Idaho	5mi.E.Henry's L	7-1	6500	Targhee	1	- 3		1	70.0	
					Average 1	for Dr	Drainage	Stail	58.7 3	16.	3 17:5	10,2	
	GALLATIN RIVER					* our admite			au vereda d				
	Devil's Slide	Hyalite Cr.	Mont.	20mi.S.Bozeman	14-55-6里	8100	Gallatin		hid teaguer 3 research	48.2 14.0	7-91 0	13.3	
	Hood Meadow	=======================================	±	14mi." "	22-4s-6E	0099			arres -councide	9		0.7	
	Hood Meadow Extn	=		Þ	22-48-6国	0099			Ann Street Street	9	_	0.9	
	Mystic Lake No.1	Bozeman C	= :	it。SE。it	31-32-7里	0099		23.4	30.3 2	6.0 5.6	5.7	7.4	
	Q.		= :		31-32-7国	0099				10		6.3	
	e Mile	Gallatin River	= \$	S.Gallatin	1-11S-5E	7150	ri Pi		defeat rendember	13	13	7.6	
	Koss Feak	Ross Cr.	eda più	12mi.N.Bozeman	10-1N-6E	$\overline{}$	Gallatin		1	11		1.6	
		10.00 /0.1	d gudpana - no		Average	or To	nrarnage	22.0	57.4.1.	0	2	0	
*	*On adjacent Drainage	- bi		-bà									

*On adjacent Drainage #Readings Feb. 15



MISSOURI AND ARKANSAS RIVER WATERSHEDS
Summary of Federal and State Cooperative Snow Surveys

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	Main Drainage	Tepor		Location		TT EV.	lal	Mar.	Nous	Course		Measurement	suts
	and	Drainage	State	Locality	Descrip-	121	Forest	Av. Sr	Snow De	Depth Av.	v.Water	r Content	ent
No	No Snow Course				tion			Avg. 1	939	1940 AV	60	939 11	86
	define rangestia							In. I	n.	In. In	n. I	n. I	n
9	Chessman Res.	Tenmile.	Mont.	ಥ	2-8N-5W	6200 E	Helena	16.9 2		3.7 1	+•3	6.4	3.3
1	Goat Mountain	South Fork	= 1	Jilman	117.5M112.9W		evis& Clark			0	7.5 1	10.2	12
36	Stemple		= :	ple Pass	6-13N	E 0069	elena	-	0		2.5	0.6	5.9
닭,	Tennile Cr.Lower	Ten	= :	ni .SW.Helena	13-8M-6W	6250		~	N/				7.5
7.	Tenmile	± :		=	13-871-6W	0089	=		Q		9.	10.0	6.5
43				**	9-8N-5W			and the second second	0		5	200	0.8
	Grasshopper	Grasshopper Cr	= :	S.W.S.Spgs	19-9N-8E	10007	r s&Clark	16.4 11	16.7 11			3.4	3.4
	King's Hill		ine i	S.S.S.S.S.	55-13四-7更	7950	ŧ		Q	<u>rl</u>	5	1.5	¥.8
	Orville Harris	Mussellshell R	=	12mi.E.W.S.Sngs	31-101-9里	6500	***	16,2 1	5		-1	3.7	6.5
	B/0				Average f	or Dra	Drainage	7.5	3.6			8.1	5.6
	MARIAS RIVER							-		١			
200	Desert Mountain* Marias Pass	Cutbank Cr. Two Medicine	Mont.	Umi.S.Belton Summit	48 311-19W	5500 G	FlatHead Glacier MP	200 27	148 65 80 144	100	SIC	13.4	50
			enedas raik.		Average f	or Di		山	10	14	100	1-9-1	9.6
	YELLOWSTONE PIVER	pd ·			филом		,		·				
,		~ 6									elembro e emer		
25	Lupine Creek Lupine Creek	Lupine Creek	MYO	SE Gardine	= :	7300 1	el NateP		~	26.9	~ · ·	2.5	5.00
100	Beaver Dams	= = = = = = = = = = = = = = = = = = =	=		19 OLLEG- 11	7200	: ==		N C		ת בו	o n	۲. ۲. ۲
		W.Br.Rock Cr.	Mont.	10mi.W.Red Ldg	2-8S-18E		Custer	16.6	22.2 1		7.2	0	200
2			Wyo.	Smi M. CanyonJet 41 71110	.5W		د الم		0		1	5.0	500
	Cooke City	ප් ප්	Mont.		E	-	Absaroka		S		5.5	0.	5.5
	Crevice Mtn.#1	Yellowstone	=	iner	E6-S6		0.		7		247	8.6	1.6
		=	=	H 11 0		8200	=			0	7.0	9.2	9.2
~	Lake Camp	3 2	Wyo. Smi.	田. HishingBr.	子	7850	HH H H	-	0	Q	8.2	7.3	9.8
	Porcupine	Porcupine Cr.	Mont.	IIE Milsall		6500	oka	-	5	0.8	1.2	3.2	5.5
	5				Average f	OL	Drainage	7	03	5.0	8	0.2	0.5
*Ad	*Adjacent Drainage												

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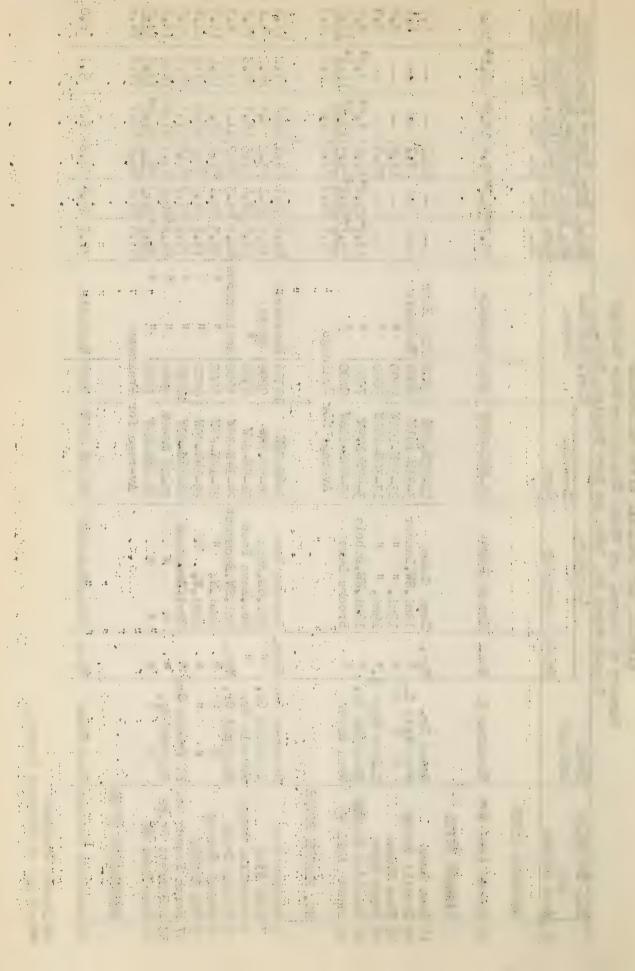
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MISSOURI AND ARKANSAS RIVER WATERSHEDS

Summary of Federal and State Cooperative Snow Surveys Issued March 10, 1940, at Fort Collins, Colo.

		T 8	sued N	9	at Fort Collins,	s, Colo.							
	Wain Drainage	Local		Location		Elev. National		Mar.l	Snow Course		Measurements	ement	EQ.
	and	drainage			Descrip-	Forest		Av. Sr	Snow Depth		Av.Water	Content	nt
No	No Snow Course		State	Local i ty	tion		7	Avg. 1	1939 1940	40 Avg.	• 1939	9 1940	2
									In. In.		In.	In.	
	SHOSHONE RIVER												
50	50 Brooks Lake #3*	Shoshone R.	Wyo	Brooks Lake	23-44N-110W	9200 Washakie		49.7+5	t. 6th - 9. 55 - 7. 6th	.4 13.6°	5 16.14		12.2
	BIGHORN RIVER											·	
77.	Dome Lake		Wyo.	Dome Lake	11-53N-87W	E H	d	1	16	0.1	-		5.5
されて	Sawmill Glade	Popo Agie R.	= =	SW Lander	3-31M-101W	8500 Washakie		1	0)1	1-0		C	70
47	South Pass	L-Pono Agie R.	= =	: =	13-30N-101W	0006		1 1	1 1 2 2 1	かす。			0 0
64			E: 3	NW Dubois	3-42N-109W	7500		18.9-2	18.9-25.0-116.6	r	5+ 3.3+	Г	4.3
20	Brooks Lake #3	Wind Kiver	=	brooks bake	Average for	yzoo Drainage	7 11	45,4	7 40 3 22 6	22 6 8 6		(7 7
	NO. PLATTE RIVER					0							
	Cameron Pass	Cr.	Colo.	Colo. Cameron Fass		四		149.8 5	111 1-6	44.1 16.3	3 17.2		15.4
7		Illinois Cr.	= :	7mi .SE.Rand	24-5N-78W	9200 Routt		32.57	7.1 23				년 :
1 22			=	Rot Ears Pass	21-5N-82W			05000	2 4 51				Ų,
7		Encepent Cr.	Wyo.	(mi.sw.momnt	MCS-IT-TC		Medicinebow 1	0 T +	25 5.00				50
» σ	Webber Spring		: 2:	TOBLI W. I	W-M-W-00	30000		7 48 9 67	14 7 00	66.2 25.9	9 27.5		21.6
37	North French Cr.	N. French Cr.	=	Cent/Saratoga		10260	\$ ma	75.6 17	7.7 72				9
38	N.Barrett Cr.#2	Barrett Cr.		=======================================	3	9400 II	=	54.846	0.6 53		ndr	-	N
39	Ryan Park #2	=	=	=	34-16N-81W	1 0018	te	34.2 44	1.3 23			-	11.2
					Average for	urainage		53.5 5	59.5 46	40.0 10.7	7	*S 14	9.
	SWEETWATER RIVER				-de-sk-sk								
29	29 Grannier Meadows Rock Creek		Wyo.	20mi.SW.Lander	19-30N-100W	9000 Washakie	r deskullingten zust his n	32.7 3	36.4 22.8	88	0 9.1		0.9
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*Adjacent Drainage *Readings on Original Course.



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MISSOURI AND ARKANSAS RIVER WATERSHEDS Summary of Federal and State Cooperative Snow Surveys

		Issi	ed Ma	Issued March 10, 1940, at F	Fort Collins	, Colo	•						
	Main Drainage	Local				Elev.	National	Mar.l	Snow.	Cours	9	Measurements	lents
	and	Drainage	State	Locality	Descrip-		Forest		Snow E	Depth	Av . Wat	Av.Water Content	tent
No	Snow Course	The Strategy			tion			Avg.	1939	1940	Avg.	1939	1940
	T.APAMTE RIVER							In.	In.	In.	In.	In.	In.
	THE ATTLE THE ATTLE												
2	Brooklyn Lake	Nash Fork	Wyoe	7mi.Mw.Cntennial	11-16N-79W	10200	MedicineBow	8.64	51.0	36.6	16.6	17.6	11.7
17		Fox Creek	F	Tox Park	21-13M-78W	9200	н н		9.	AND THE PERSON NAMED IN	۲.4	7.6	7.8
34	Pole Mountain #2*Soldier Cr.	Soldier Cr.	=	10mi,SE.Laramie	35-15N-72W	8700	=======================================		27.7	-	4.2.4	6.2	7.7
35		Libby Creek	=	Smi.NW.Ontennial	29-16N-78W	8700	=		32.4	20.1	9.9	8.7	7.
		Mash Fork	=	5mi .NW. Untennial	24-16 N-79W	9500	H H	0	-		±0.7	8.1	2.4
7	W.Port.G-P.TunnelLaranie	e e e	10.	4mi.N.Chambers L	7-8N-75W	8600	Roosevelt		32.5	22.6	7.3	8.1	7.1
50	Deadman Hill*	Deadman Cr.		10mi.W.R.Feather	MC	10200	=	M	46.3	MAN THE	10.3	10.6	0.6
-	Deadman Hill#2*	Deadman Cr.	=	8mi SWon "		10200	11		41.1	25.3	2.0	4.6	7.0
88	Roach	LaGarde Cr.	=	Smi.NW.Glendevey	5-10N-77W	9800	52	1	1	54,1	1	1	12.8
	Served Surgery				Average for	r Drainage	nage	31.1	36.7	27.4	3.6	9.5	7.8
	SOUTH PLATTE RIVER	田						1				,	
-		Platte	Colo.	Pass			Pike		47.1	22.2	₹.2	11.3	5.7
15			=			100001	=		4.9	0.0	0.5	9.0	0.0
83	Jefferson Cr.#2	Jefferson Cr.	±	efferson	-	10100		13.00	1	21.4	3.2	1	5.6
	THE REAL PROPERTY.				Average fo	or Drainage	nage	15.8	26.8	14.5	3.6	0.9	3.8
	CHOW CREEK												
34	Pole Mountain #2	Crow Creek	Wyo.	10mi .SE Laramie	35-15M-72W	8700	MedicineBow 18	18.2127	27.7	13.6	4.54	6.2	3.7
	POUDRE RIVER												
Н	Cameron Pass	Joe Wright Cr. Colo.	Colos	ass	MC	10300	Roosevelt				16.3	17.2	15.4
-	Chambers Lake	Poudre River	=	s Lake		9000					200	2.0	2.6
2	Big South	=======================================	=	2mi .H. Chambers L	33-8N-75W	8600	=				1.8	1.0	2.7
20	Deadman Hill	M.Poudre R.	=	-	-75W	10200	=			2000	10.3	10.6	0.00
62	Lake Irene*	Big S.Poudre	=			-	Ry.Mtn.N.P.	56.2			17.9	18.2	14.8
-	Hour Glass Lake	L.S.Poudre	=				Roosevelt			-	7.0	6.1	5.0
71	Deadman Hill #2	M.Poudre R.	=	8mi.SW.R.Feather		10200			41.1	25.3	8.7	4.6	7.0
		Company on the			Average for	or Drainage				-	9.3	9.6	8.5
	BIG THOMPSON	-		-	make Austria	-	,				1		1
602	Lake Irene* Fall River	Big ThompsonR	Colo.	Colo. Imi.SW.Milner P.	8-5N-75W 6-5N-75W	10600	Ky Mtn N F	200.	58.0	10°4	17.9	18.2	14.8
* A d	jacent Drainage	dings on	7:0:40	irse	0	Drain			10		17.1	17.6	14.8
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MISSOURI AND ARKANSAS RIVER WATERSHEDS

Summary of Federal and State Cooperative Snow Surveys Issued March 10, 1940, at Fort Collins, Colo.

1			rssned	ed March 10, 1940, at Fort Collins, Colo.	at Fort Co	llins,	Colos	TO SEE	Market 10	- House Bri		1
	Main Drainage	Local			020	Eleve	Elev. National	far.1 S	now Co	Mar. 1 Snow Course Measurements	asureme	ents
;	and	Drainage	State	Locality	Descrip-	-	Forest	Iv. Sno	w Dept	Av. Snow Depth Av. Water Content	ter Col	ntent
ON	No Snow Course				tion			IVE. 19	39 194	Avg. (1939) 1940 Avg. (1939) 1940	1939	1940
	ST. VRAIN RIVER							In. In. In. In.	In	In.	In.	In.
						- 1						
11	41 Wild Basin	N.St. Vrain R.	Colo.	N.St.Vrain R. Golo. 5mi.W.Allen's F. 24-3N-74W	24-3N-74W	10000	10000 Ry.Mtn.N.P. 34.1 43.9 28.1	34.1 43	.9 28.	1 8.2	9.1	6.9
	BOULDER CREEK		7									
m'	5 E.Port. Woffat T. S.Boulder Cr. Colo. East Portal	S.Boulder Cr.	Colo.	East Portal	2-25-74W	9400	9400 Roosevelt	0.3 15	.5 11.	9 2.6		2.
00	60 University Camp#2N.Boulder Cr.	N.Boulder Cr.	=	5mi.SW.Ward	Average f	10300 "		28 0 29 27 2 72	1 th	38.0-59.4 44.5 12.4.	19.1	14.0
	CLEAR CREEK							1		-		0
19	61 Loveland Pass#2	Clear Creek	Colo	Colo. 10mi.W.Georgetown	. 27-45-76W 10100 Arapaho	10100		39.8-150	.5 33.	39.8450.5 33.8 10.14 12.9	12.9	8.3
	APKANSAS BIVER											
			A P									
19	Tennessee Pass	Tennesses Cr. Colo.	Colo.	Tennessee Pass	21-85-80W	10200	1 10200 Cochetopa 33.7 40.4 23.5 8.2 10	53.7 140	.4 23.	5 8.2	10.6	5.6
21	Twin Lakes Tun.	Lake Creek	==	9mi.W.Twin Lakes	22-11S-82W	105001	=	52.0 38	.2 24.	4 9.2	9.6	7.6
745	Warshall Creek*	Poncha Creek	n	Marshall Pass	54-48N-6E	10800		13.0 47	.8 36.	0 10.7	12.3	5.5
43	Poncha Greek	п	n		19-48N-7E	10500	=	30.1 35	.0 27.	6.7 0	9.6	4.3
72	72 Whiskey Creek #2 Whiskey Cr.	Whiskey Cr.	#	Pass	37.2M105.2W	10300	MaxwellGrant	27.4 33	.8 21.	1 7.6	8.3	6.00
77	LaVeta Pass#2*	Cuchara Cr.	=	LaVeta Pass	22-28S-70W	9300	San Oristo Gr.	34.4 43	·8 34.	6-1 0	10.3	7.7
78	Four Mile Park#2	Lake Creek	×	3mi .SW. Twin L.	23-11S-81W	9700	Cochetopa 1	4.0 15	.5 12.	4 3.5	3.9	3.1
13	Fremont Pass #2	E.Fork Ark.R.	=	Fremont Pass	2-85-79W	11/400	Arapaho	00.5.56	.8 36.	6 12.9*	15.7	9.8
					Average for Drainage	r Drai	nage	53.1 38	.9 26.	9 8.5	10.0	6.3

*Adjacent Drainage *Readings on original course.

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